

BEST AVAILABLE COPY**Remarks**

1. Claim 23 has been amended as suggested by the Examiner in section 1 of the Office Action.
2. The Examiner has rejected claims 13 to 15, 17 to 21 and 33 under 35 U.S.C. 102(e) as being anticipated by Kadikian et al (US6631134). The Examiner will note that many of the independent and subsidiary claims submitted herewith have been amended to include the term "transport" in association with the term "layer". This constitutes a clarifying amendment only to the degree that the applicant wishes to highlight, by way of this amendment, that the Examiner has misconstrued the nature of the present invention and thus the relevance of prior art references such as Kadikian.
3. A transport layer in a communications network comprises a combination of hardware and software resources that enable communications traffic to be conveyed over the network. Several transport layers may share a common underlying physical transport resource such as a wave division multiplexed (WDM) optical network, for example. The WDM optical network is itself a transport layer although one that is primarily physical in nature and so might be considered as a lower transport layer in a hierarchy of transport layers. Each transport layer has its own associated resource capacity (communication bandwidth) available for allocating in response to requests from end users or the like for communication resources on the network. Each transport layer organizes its own resource capacity according to the physical switching regimes and/or software (protocol) switching regimes that apply to that layer. It should also be noted that a transport layer is a layer in the sense that it comprises more than a single physical resource, i.e. a single link or a single node do not comprise transport layers even at the physical layer.

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4. Considering claim 13 in light of Kadikian, an "end user" is not a transport layer. An end user does not have resource capacity which it can allocate in response to requests to other end users. A "service provider" is not a transport layer. A service provider is akin to an operator or a manager that exerts some control over the allocation of communications resources in a communications network. While Kadikian does disclose a means for determining within a transport layer (an optical network in this case) whether that transport layer has sufficient resources to support a request for service from an end user, it does not disclose nor suggest, where insufficient resources are available on one layer, any means for automatically requesting further resources by that layer from one or more other transport layers. The step 1500 of figure 15 of Kadikian comprises a request from an end-user for resources on the optical network. If that request fails, it can be repeated. Clearly, this does not teach nor suggest the feature of claim 13 that, where insufficient resources are available on one transport layer, that layer automatically requests further resources from another of said transport layers. In Kadikian, the optical network is the only layer and it would be illogical for it to automatically request of itself further resources when such resources were not available in the first place. Nor does Kadikian disclose that said transport layers are arranged as a hierarchy of layers.

5. In view of the foregoing, it is clear that Kadikian does not disclose all the features of claim 13 which is therefore not anticipated and allowable thereover. The same analysis applies to claims 14, 15, 17 to 21 and 33 which are also allowable by inference.

6. The Examiner has rejected claims 1 to 8 and 22 under 35 U.S.C. 103(a) as being unpatentable over Kadikian in view of Grover (US5848139). The Examiner will be aware that in *ex parte* examination of patent applications, the Patent and Trademark Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780,

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1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent and Trademark Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent and Trademark Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985). A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142.

7. Considering claim 1, as has already been indicated, Kadikain does not disclose a hierarchy of transport layers (multiple resource-allocation transport layers), nor does it disclose, for example, that a first transport layer (the optical network in the case of Kadikian) itself provides an indication to a second transport layer (there is no second layer disclosed in Kadikain) of said required resources to be allocated from said second transport layer to said first transport layer. Further,

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and also by way of example, Kadikian does not disclose that the second layer automatically offers said required resource together with a condition for use of those resources. In Kadikina, there is no second transport layer. Also, In Kadikian, the metric(s) assessed by the service provider is(are) provided as a requirement by the end user not the service provider so even if the service provider could be considered as the second transport layer, which it cannot under any reasonable construction, it does not provide the condition for use of those resources as required by claim 1. It will be apparent that the applicant can make further distinctions over the failure of Kadikian to disclose features of claim 1 of the present application, but in view of the legal burden incumbent on the Office, it is sufficient for the applicant to have demonstrated that the primary prior art reference relied on by the Examiner fails to teach or suggest multiple different features of the present invention as defined by the independent claims as currently pending in this application. Consequently, it is not possible based on Kadikain to satisfy the burden that the prior art reference (or references when combined) must teach or suggest all the claim limitations.

8. There is nothing in the disclosures of Grover, Desai and/or Tappan that combined with Kadikian teach or suggest all the claims limitations of the various independent claims of the present application.

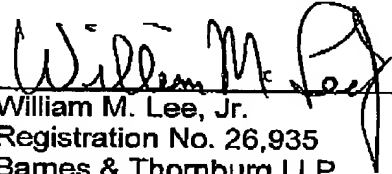
9. The present invention makes a useful contribution to the art in that it provides a network in which a hierarchy of transport layers are arranged to automatically satisfy requests for communications resources through automatic interaction of the transport layers. As such, there is no requirement for manual intervention at a management level in the allocation of resources on such transport layers which is the common known response to resource allocation difficulties.

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10. In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance.

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Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)

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